

ABSTRACT

5 A motor generating cogging torque has one-quarter the cycle of basic cogging
torque and an extremely small absolute value. First, in order to reduce the cycle of
the cogging torque to one-half the cycle of the basic cogging torque, a basic
configuration of the core is determined by setting opening angles of its slots to an
appropriate electrical angle ranging from 80° to 95° and from 20° to 35° . Next, to
10 produce the above-mentioned effects, an angular displacement of one-quarter the
cycle of the basic cogging torque is provided in the motor. Furthermore,
polarizing the core with a skew angle equal to one-half or less the cycle of the
basic cogging torque at the same time allows the cogging torque to be reduced
effectively while decrease in efficiency is minimized.